POLAND **16-07-2026**

Eugenix® Indigenous Ecology
Natural Textiles Tiered Recycling Fee System

Purpose

To document a comprehensive set of solutions for the natural textile industry, which currently suffers from a broken circular economy resulting in large-scale waste, ecological degradation, and economic inefficiencies across farming, production, resale, reuse, and recycling. This document proposes a **Tiered Recycling Fee System for Natural Textiles**, modeled on the *Eugenix® EU Petition for Tiered Recycling Fee System* submitted to the European Union that allows for circular control of petropolymers and petrochemicals and expands the framework to include Indigenous ecological knowledge, climate sustainment principles, and advanced repurposing pathways. Reading the petition is strongly advised to understand tiered recycling fee system proposed for petropolymers, petrochemicals, natural textiles and all other resources that must be protected and recycled.

Introduction

Eugenix P.S.A. has previously submitted to the European Union the petition *Eugenix® EU Petition for Tiered Recycling Fee System*, which outlines a circular control mechanism for petropolymers and petrochemicals. The system introduces mandatory fees and deposits at the point of oil sale destined for polymer production, increasing the base value of virgin materials and improving the economic viability of recycled materials.

Tier 1 fees finance global tracking of oil sales destined for petropolymer and petrochemical production and increase the value of virgin materials making waste recycling more economical than production of new petropolymers as Tier 1 fee applies only to oil sales. Tier 2–4 fees and deposits enable return-to-producer pathways and enforce circularity. The petition, together with complementary

Eugenix® proposals, forms a unified solution set addressing consumer, producer, governmental, and environmental needs.

This document extends the same logic to natural textiles, which—despite being biodegradable—are currently trapped in a linear economy that produces waste, soil depletion, water contamination, and climate-related vulnerabilities.

Tiered Recycling Fee System for Natural Textiles

A Tiered Recycling Fee System for natural textiles would enable comprehensive data collection and circular governance across all stages of textile life:

- Natural textile crop farming
- Fiber processing and manufacturing
- Wholesale and retail distribution
- Clothing and textile product production
- Global trade and transit
- Collection, sorting, reuse, and recycling

Expanded Tier 1 Function

Tier 1 fees must provide a dedicated budget to identify, map, and close all circularity gaps ("loops and pinholes") that currently allow used textiles to escape tracking and end up in landfills, incinerators, or informal waste streams. Tier 1 funding supports:

- **Comprehensive surveys** of all textile-related infrastructure:
  - new clothing stores
  - reused and vintage clothing stores
  - charity shops
  - textile collection bins
  - municipal waste stations
  - landfill yards
  - informal resale markets

- **Corrective policy development** for each category of textile-handling entity, ensuring that every point of sale, donation, or disposal is integrated into the circular system.

- **Standardized reporting systems** assigning numerical values to all collected textiles:
  - Clothing Type
  - Fiber Composition, Non-Textile Elements,
  - Chemical and Color Treatment
  - Weight, Gramature, Thread
  - Condition, Lifespan
  - Reuse Potential and Repurposing Pathway
  - Recycling Processes and Requirements

This numerical data becomes the backbone of a global textile-tracking network. It enables continuous redevelopment of requirements for producers, consumers, resellers, and recyclers—ensuring that **no textile ends up in a location unprepared to process it**.

Tier 2-4 finances the creation of return-to-producer pathways, allowing used textiles to be routed back to manufacturers, regional recycling hubs, or specialized repurposing facilities. By closing all loops and eliminating unmonitored disposal points, **Tier Recycling Fee System for Natural Textiles** ensures that natural textiles remain within a controlled circular economy from production to end-of-life.

Natural Textiles Recycling and Repurposing

Natural textiles recycling and repurposing within the Tiered Recycling Fee System offers several repurposing pathways. These items include insulation, geomembranes, sandbags, planter bags, reusable shopping bags, rags, paint-protection textiles, and geomagnetic dam materials. Below presented list is just an introductory list compiled without full research of all present recycling and repurposing practices that are possibly wider and include more solutions for natural textiles to prevent a waste of valuable and ready resource. Repurposing of clothing should be done by determination of what secondary products can be done form what used clothing and fabrics that allows to sort all collected clothing into ready to repurpose textile types for secondary products.

1. Construction, Infrastructure, and Civil Engineering

- Loose-fill insulation and layered cotton blocks (replacement for fiberglass)
- Woven and non-woven geomembranes and geogrids for drainage, erosion control, slope stabilization, sidewalks, and foundations
- Agricultural and nursery ground covers replacing plastic membranes
- Sandbags for flood control (cotton or jute instead of nylon)
- Natural-fiber geotextile tubes for riverbank reinforcement and coastal protection
- Textile-reinforced earthen walls for rural housing and emergency shelters
- Natural textile composites for acoustic panels, thermal barriers, and interior architecture

2. Forestry, Land Restoration, and Climate Adaptation

- Forest planter bags for reforestation and post-fire restoration
- Seed-bomb textile pods for aerial reforestation
- Biodegradable erosion-control blankets for landslide-prone regions
- Natural textile root-support wraps for transplanting large trees
- Textile-based moisture-retention mats for drought-affected soils

3. Household, Retail, and Consumer Reuse

- Reusable cotton shopping bags (plastic replacement)
- Cotton rags for paint and chemical cleaning (replacing polyester)
- Paint-protection textiles (instead of plastic sheets)
- Upcycled textile furniture covers and upholstery
- Natural textile stuffing for pillows, cushions, and pet bedding
- Refurbished clothing components (buttons, zippers, patches, trims)

Additional benefit that results from Natural Textiles Tiered Recycling Fee System and Petropolymers-Petrochemicals Tiered Recycling Fee System is that wasted textiles rugs filled with

chemical, oils and paints by the fee contained in those substances will be more likely recycled due to Tier 2-4 Fee contained in such hazardous substances, while natural textiles will make it easier for recycling entities to process them.

4. Industrial and Agricultural Applications

- Natural textile sacks for grain, seeds, and agricultural storage
- Biodegradable bale wraps for hay and straw
- Textile-reinforced compost bags
- Natural-fiber filtration media for water treatment
- Textile-based evaporative cooling pads for greenhouses

5. Advanced Circular Technologies

- Mechanical fiber recovery for cotton, hemp, flax, jute, and wool
- Chemical recycling of cellulose fibers into regenerated yarns
- Bio-enzymatic fiber separation for mixed-material garments
- Textile-to-biopolymer conversion (cellulose → bioplastics)
- Natural textile biochar production for soil regeneration
- Textile-based substrates for mycelium growth (biodegradable composites)

6. Climate-Focused Engineering Innovations

- Eugenix P.S.A. Geomagnetic Dam plan to use natural textile bags filled with rock and sand
- Textile-reinforced micro-dams for water retention in drought regions
- Natural-fiber storm-resilience barriers for coastal communities
- Textile-based carbon-capture mats infused with algae or moss

Conclusion

Establishing a Global Tiered Recycling Fee System for Natural Textiles

The global natural textile sector urgently requires a unified, intergovernmental circularity framework. According to the **United Nations Environment Programme (UNEP)**, the textile industry generates over 92 million tonnes of waste annually, with more than 70% of all clothing ending up in landfills or incinerators. The OECD reports that less than 15% of textile waste is formally collected, and only 1% is recycled into new clothing, demonstrating a near-complete failure of circularity.

The Basel Convention Secretariat has documented that transboundary movement of textile waste—especially mixed natural and synthetic fibers—has increased by over 60% in the last decade, often flowing to countries without adequate recycling infrastructure. Meanwhile, UNCTAD estimates that global textile production has doubled since 2000, while the average number of times a garment is worn has decreased by 36%, accelerating waste generation.

These statistics highlight the structural gaps that a **Tiered Recycling Fee System** can close. By mandating global data collection, financing return-to-producer pathways, and enforcing circularity standards, the system would address the textile industry's most critical weaknesses: untracked waste, unregulated disposal, and insufficient recycling capacity.

A global mechanism is therefore essential. The Tiered Recycling Fee System for natural textiles should be established through a **binding intergovernmental agreement**, ideally under the United Nations or a coalition of international bodies capable of enforcing global compliance, harmonizing data standards, and supporting developing nations in building textile recycling infrastructure. To implement a Tiered Recycling Fee System for natural textiles at a global scale, an intergovernmental mechanism is required. The following pathways are recommended:

1. United Nations Framework Convention on Natural Textile Circularity (UN-FTNC). A new UN convention could be established under UNEP or UNCTAD, mandating:

- Tiered recycling fees for all natural textile production
- Global data reporting standards
- Circular economy targets for textile-producing nations
- Protection of Indigenous textile farming practices
- Climate-aligned agricultural planning

2. Expansion of the Basel Convention. Natural textile waste and mixed-fiber waste could be added as a regulated category, enabling:

- International tracking
- Mandatory return-to-producer Tier systems
- Restrictions on landfill disposal

3. OECD or EU-UN Joint Circular Textile Protocol. A cooperative protocol could harmonize:

- Tier Fee structures
- Data systems
- Recycling standards
- Trade rules for reclaimed textiles

4. WTO Sustainable Textile Trade Agreement. A trade-focused agreement could:

- Incentivize circular textile exports
- Penalize linear waste-producing supply chains
- Support developing nations in textile recycling infrastructure

5. Global Indigenous Textile Stewardship Council (GITSC). A new body recognizing Indigenous ecological knowledge could:

- Certify sustainable textile farming
- Oversee climate-aligned land management
- Ensure equitable participation in circular textile economies

Final Statement

The natural textile industry stands at a crossroads. Without intervention, global textile waste is projected by UNEP to reach 134 million tonnes per year by 2030, driven by rising consumption and declining garment lifespans. The WTO notes that textile trade already accounts for over USD 1 trillion annually, yet less than 2% of this value is reinvested into recycling or circular systems. The OECD warns that without mandatory producer responsibility, textile waste will continue to grow faster than recycling capacity, widening the ecological deficit.

A **Tiered Recycling Fee System**, implemented through a UN convention or equivalent intergovernmental policy initiative, offers a realistic and enforceable solution. By financing global tracking, closing circularity gaps, and supporting return-to-producer systems, it would transform natural textiles into a fully circular resource. Such a system would:

- Protect ecosystems and agricultural lands
- Reduce landfill pressure and textile-related pollution
- Support Indigenous and rural textile farmers
- Create new recycling industries and skilled labor markets
- Align textile production with climate-sustainment goals

With coordinated international action, natural textiles can shift from being a major source of waste to becoming a cornerstone of global ecological resilience. Establishing a Tiered Recycling Fee System is not only possible—it is necessary for the future of sustainable textile production and planetary health. **A Tiered Recycling Fee System for natural textiles can succeed** through binding international cooperation, ideally under a UN convention or equivalent intergovernmental policy initiative. Such a system would create full circularity, protect ecosystems, empower Indigenous and rural communities, and transform natural textiles into a cornerstone of global climate sustainment.

With regards to valuable natural resources

K Pawlak

Godeo Optimo Maximo.
Arctic Magnetic Earth Naturalist.
Arctic Mankind Extinction Noticed.
Antarctic Mass Excavation Nonetheless.

Founder and Board President of
Eugenix P.S.A. - simple shares corporation of
Arcticus Blancus - Indigenous polar hair tribe.